

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing (day/month/year)</b> 14 March 2001 (14.03.01)	
<b>International application No.</b> PCT/JP00/04359	<b>Applicant's or agent's file reference</b> 99077PCT
<b>International filing date (day/month/year)</b> 30 June 2000 (30.06.00)	<b>Priority date (day/month/year)</b> 30 June 1999 (30.06.99)
<b>Applicant</b> MASUI, Kenji et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 07 December 2000 (07.12.00)

☐ in a notice effecting later election filed with the International Bureau on:  
 \_\_\_\_\_

2. The election ☒ was  
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland	<b>Authorized officer</b>  Henrik Nyberg
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

FURUYA, Kaoru  
Hamacho-hanacho Building 6th Floor  
2-17-8, Nihonbashi-Hamacho  
Chuo-ku, Tokyo 103-0007  
JAPON

Date of mailing (day/month/year) 02 August 2000 (02.08.00)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 99077PCT	
International application No. PCT/JP00/04359	International filing date (day/month/year) 30 June 2000 (30.06.00)
International publication date (day/month/year) Not yet published	Priority date (day/month/year) 30 June 1999 (30.06.99)
Applicant KAO CORPORATION et al	

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, the attention of the applicant is directed to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
30 June 1999 (30.06.99)	11/184762	JP	14 July 2000 (14.07.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Susumu Kubo

Telephone No. (41-22) 338.83.38

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTICE INFORMING THE APPLICANT OF THE  
COMMUNICATION OF THE INTERNATIONAL  
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To:

FURUYA, Kaoru  
Hamacho-Hanacho Building 6th Floor  
2-17-8, Nihonbashi-Hamacho  
Chuo-ku, Tokyo 103-0007  
JAPON

RECEIVED

01.1.22

FURUYA&amp;CO.

Date of mailing (day/month/year) 11 January 2001 (11.01.01)		
Applicant's or agent's file reference 99077PCT		IMPORTANT NOTICE
International application No. PCT/JP00/04359	International filing date (day/month/year) 30 June 2000 (30.06.00)	Priority date (day/month/year) 30 June 1999 (30.06.99)
Applicant KAO CORPORATION et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:

US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:

BR,CA,CN,EP

The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 11 January 2001 (11.01.01) under No. WO 01/01787

**REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)**

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

**REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))**

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.14.35	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
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# PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference <b>99077PCT</b>		<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/JP00/04359</b>	International filing date (day/month/year) <b>30/06/2000</b>	Priority date (day/month/year) <b>30/06/1999</b>	
International Patent Classification (IPC) or national classification and IPC <b>A23D7/00</b>			
Applicant <b>KAO CORPORATION et al.</b>			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand  <b>07/12/2000</b>	Date of completion of this report  <b>25.06.2001</b>
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office</b> <b>D-80298 Munich</b> <b>Tel. +49 89 2399 - 0 Tx: 523656 epmu d</b> <b>Fax: +49 89 2399 - 4465</b>	Authorized officer  <b>Korb, M</b>   <b>Telephone No. +49 89 2399 8639</b>

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP00/04359

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-14 as originally filed

Claims, No.:

1-6 as received on 06/06/2001 with letter of 06/06/2001

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/JP00/04359

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims 1-6
	No: Claims
Inventive step (IS)	Yes: Claims 1-6
	No: Claims
Industrial applicability (IA)	Yes: Claims 1-6
	No: Claims

**2. Citations and explanations**  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: WO 96 32022 A (UNILEVER NV ;UNILEVER PLC (GB)) 17 October 1996 (1996-10-17) cited in the application  
D2: EP-A-0 417 562 (KAO CORP) 20 March 1991 (1991-03-20) cited in the application  
D3: GB-A-1 564 801 (UNILEVER LTD) 16 April 1980 (1980-04-16)

D1, discloses spreads comprising a continuous fat phase and a dispersed aqueous phase. Cf. Example 2 of D1 which discloses a fat blend (100 parts) comprising inter alia 44 parts diglyceride concentrate. Said diglyceride concentrate contains 69% diglycerides. The aqueous phase (20 parts) comprises inter alia 18.90 parts water and 0.30 parts salt. D1, however, fails to teach the addition of a demulsifier. D1 corresponds substantially to Comparative Example 1 of the present application, showing that whey does not work as the demulsifier as referred to in the present application.

D2 (cf. claims 1-6 and p.2, l.44-47) describes a water-in-oil emulsion, which contains 0.1-80 wt.% of at least one diglyceride and a specific amount of a specific phospholipid mixture in the oil phase in order to overcome the problem of stability of the water-in-oil emulsion.

D3, discloses specific phase inverting water-in-oil emulsions comprising partial glyceride emulsifier and oil-in-water promoting emulsifiers to improve flavour release in low fat spreads containing flavouring in the aqueous phase and oil-soluble flavour components. Example 1 (p.4, table) of D3 discloses a specific fat blend for the fat phase comprising inter alia 1.5% diglycerides.

2. Neither the use of a demulsifier to reverse at least 30% of the water-in-oil (w/o) phases of a composition comprising such a high amount of diglycerides, i.e. 15 % by weight or more, based on the total oils and fats and a flavour component(s) within one minute after it has been introduced into water at 36°C according to claims 1-4 nor the water-in-oil emulsion composition according to claims 5 and 6 comprising such a high

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/JP00/04359

amount of diglycerides and specific amount of demulsifier and a flavour component(s) in order to overcome the problem of flavour release are disclosed or suggested in the documents cited above.

Hence the subject-matter according to claims 1-6 is considered new over D1 or D2 or D3 (Art. 33(2) PCT) and involving an inventive step with respect to the said documents, in particular D1 (Art. 33(3) PCT).

**Re Item VII**

**Certain defects in the international application**

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D1 is not mentioned in the description, nor is this document identified therein.



10/019427  
JC13 Rec'd PCT/PTO 31 DEC 2001

## CLAIMS

1. (Amended) Use of a demulsifier to reverse at least 30% of the w/o phases of a composition comprising (1) the aqueous phase based on water and (2) the oil phase of fat and/or oil comprising 15 % by weight or more, based on the total oils and fats, of diglycerides and a flavor component(s) within one minute after it has been introduced into water at 36 °C.
2. (Amended) The use as claimed in Claim 1, in which the fat and/or oil comprises 15 to 90 % by weight of diglycerides and 85 to 10 % by weight of triglycerides and 0.05 to 20 % by weight of the flavor component and 0.01 to 5 % by weight of the demulsifier are included in the composition.
3. (Amended) The use as claimed in Claim 1 or 2, in which the weight ratio of the aqueous phase to the oil phase ranges between 80:20 and 15:85.
4. (Amended) The use as claimed in Claim 1 or 2, in which the demulsifier is at least one member selected from the group consisting of a polyglycerol fatty acid ester having HLB of 7 or more, a water-soluble decomposed protein, lysolecithin having HLB of 8 or more, a sucrose fatty acid ester having HLB of 5 or more, a monoglyceride organic acid ester having HLB of 8 or more, and a sorbitan fatty acid ester having HLB of 8 or more.
5. (Amended) A water-in-oil emulsion composition, comprising

1/15

AMENDED SHEET

(1) the aqueous phase based on water, (2) the oil phase of fat and/or oil comprising 15 to 90 % by weight, based on the total oils and fats, of diglycerides and 85 to 10 % by weight of triglycerides, 0.01 to 5 % by weight of a demulsifier and 0.05 to 20 % by weight of a flavor component(s), at least 30% of the composition being able to be reversed in the phases within one minute after it has been introduced into water at 36 °C.

6. (Amended) The composition as claimed in Claim 5, in which the weight ratio of the aqueous phase to the oil phase ranges between 80:20 and 15:85.

10019,427

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 January 2001 (11.01.2001)

PCT

(10) International Publication Number  
**WO 01/01787 A3**

(51) International Patent Classification<sup>7</sup>: **A23D 7/00**

**Yoshihiro [JP/JP]**: Kao Corporation, Research Laboratories, 1334, Minato, Wakayama-shi, Wakayama 640-8580 (JP).

(21) International Application Number: **PCT/JP00/04359**

(22) International Filing Date: **30 June 2000 (30.06.2000)**

(74) **Agents: FURUYA, Kaoru et al.**: Hamacho-Hanacho Building 6th Floor, 2-17-8, Nihonbashi-Hamacho, Chuo-ku, Tokyo 103-0007 (JP).

(25) Filing Language: **English**

(81) **Designated States (national)**: BR, CA, CN, US.

(26) Publication Language: **English**

(84) **Designated States (regional)**: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

(30) **Priority Data**:  
11/184762 **30 June 1999 (30.06.1999) JP**

**Published:**  
— *with international search report*

(71) **Applicant (for all designated States except US): KAO CORPORATION [JP/JP]**; 14-10, Nihonbashi-Kayabacho 1-chome, Chuo-ku, Tokyo 103-0025 (JP).

(88) **Date of publication of the international search report:**  
**6 June 2002**

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only): MASUI, Kenji [JP/JP]**; Kao Corporation, Research Laboratories, 2-1-3, Bunka, Sumida-ku, Tokyo 131-8501 (JP). **KONISHI,**

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*



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WO 01/01787 A3

(54) **Title: WATER-IN-OIL TYPE EMULSIFIED FAT AND/OR OIL COMPOSITION**

(57) **Abstract:** The present invention provides a water-in-oil type emulsified fat and/or oil composition which comprises a diglyceride and which is excellent in a flavor release during the time for ingestion thereof. That is, the present invention provides a water-in-oil type emulsified fat and/or composition which is composed of (1) the aqueous phase based on water and (2) the oil phase comprising 15 % by weight or more, based on the total oils and fats, of diglycerides, the composition including a flavor component(s), 30 % by weight or more of the said emulsified composition being able to be reversed in phase within one minute after it has been introduced into water at 36 °C.

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 00/04359

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A23D7/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A23D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, FSTA, BIOSIS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 1 564 801 A (UNILEVER LTD) 16 April 1980 (1980-04-16) page 1, column 1, line 12-21 page 1, column 2, line 72-92 page 2, column 2, line 66-120 claims 1,2,13-15,21	1-4
Y	EP 0 417 562 A (KAO CORP) 20 March 1991 (1991-03-20) cited in the application page 2, line 44 -page 3, line 23 page 4, line 20-27 --- -/--	1-4

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

4 October 2000

Date of mailing of the international search report

12/10/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
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Authorized officer

Rooney, K

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP 00/04359

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>WO 96 32022 A (UNILEVER NV ; UNILEVER PLC (GB)) 17 October 1996 (1996-10-17)  cited in the application  page 6, line 30 -page 7, line 32  page 23, line 18-26  claims 1,4</p>	1-5
A	<p>US 5 879 735 A (MOORE STEPHEN RAYMOND ET AL) 9 March 1999 (1999-03-09)  cited in the application  column 1, line 7-15; claim 1; example 1.4</p>	1-5

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP 00/04359

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 1564801 A	16-04-1980	AT 351914 B	27-08-1979
		AT 828776 A	15-01-1979
		AU 503491 B	06-09-1979
		AU 1941876 A	18-05-1978
		BE 848068 A	05-05-1977
		CH 629973 A	28-05-1982
		DE 2650957 A	12-05-1977
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		IE 43810 B	03-06-1981
		IT 1106503 B	11-11-1985
		JP 52084181 A	13-07-1977
		JP 60033533 B	03-08-1985
		LU 76140 A	02-06-1977
		NL 7612399 A	10-05-1977
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		SE 424500 B	26-07-1982
		SE 7612405 A	08-05-1977
		US 4115598 A	19-09-1978
		ZA 7606636 A	28-06-1978
EP 0417562 A	20-03-1991	JP 2736273 B	02-04-1998
		JP 3091441 A	17-04-1991
		DE 69006562 D	24-03-1994
		DE 69006562 T	26-05-1994
		ES 2062236 T	16-12-1994
WO 9632022 A	17-10-1996	AU 5496896 A	30-10-1996
US 5879735 A	09-03-1999	AU 1664595 A	04-09-1995
		DE 69505235 D	12-11-1998
		DE 69505235 T	29-04-1999
		WO 9522256 A	24-08-1995
		EP 0744899 A	04-12-1996
		ZA 9500967 A	07-08-1996